

REMARKS

This is intended as a full and complete response to the Final Office Action dated March 1, 2007, having a shortened statutory period for response set to expire on June 1, 2007. Applicants submit this response to place the application in condition for allowance or in better form for appeal. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-20 are pending in the application. Claims 1-20 remain pending following entry of this response. Applicants submit that the amendments and new claims do not introduce new matter.

Claim Rejections - 35 U.S.C. § 102

Claims 1-5 and 7-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Chau et al.* (US 2002/0123993, hereinafter "*Chau*").

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Regarding Claims 1, 10, and 15:

In this case, *Chau* does not disclose "each and every element as set forth in the claim." For example, *Chau* does not disclose a method for managing structured data having one or more repeating fields that includes a step of receiving a hierarchical data structure containing the structured data wherein the structured data is annotation data related to an annotated data object and wherein at least two instances of a repeating field are contained in the structured data, as recited by claim 1. Claims 10 and 15 recite similar limitations.

In the present rejection, the Examiner continues to argue that *Chau* discloses this limitation at paragraphs 0044, 0051, 0052, and 0195. As pointed out in Applicants' prior response, these paragraphs merely provide a general description of the "XML Extender" product available from IBM. The cited paragraphs describe the functionality of IBM's XML Extender product and IBM's DB2 database as including the ability to exchange data with one another. No where in this material, however, does *Chau* disclose a hierarchal data structure storing annotation data related to an annotated data object and wherein at least two instances of a repeating field are contained in the structured data. Instead, these paragraphs describe the interchange of data between two software applications available from IBM, and how the interchange may facilitate certain business activities, e.g., "Business to Business (B2B) and Business to Client (B2C) applications."

Nevertheless, the Examiner suggests:

[*Chau* discloses] receiving a hierarchical data structure containing the structured data (*Chau*; par [0042] – the hierarchical structure of an XML document" - XML documents are hierarchical; Fig. 11, reference character 1100 - "Receive all XML document containing XML data" wherein the structured data is annotation data related to an annotated data object (*Chau* par [00441] par [00511- par [0052]; par [0195] - XML document is interpreted to be an annotated data object and the data contained therein is interpreted to be annotation data in that it is related to the XML documents.

Final Office Action, p.3. Importantly, the Examiner equates the two distinct claimed elements of (1) "a hierarchical data structure containing structured data" and (2) "an annotated data object" as being the same thing. By interpreting an "XML document" as both "an annotated data object" and "annotation data ... related to the XML document," the Examiner conveniently ignores the independent nature of these elements, as recited by the present claims in order to make this rejection. Applicants submit that "XML document" of *Chau* relied upon by the Examiner, does not, in fact, disclose both the claimed "hierarchal data object" and the "annotated data object" of the present claims.

The Examiner also cites to *Chau*, ¶ 0195. Generally, *Chau* discloses the use of an XML DAD (document access definition). "The DAD itself is an XML document. The DAD associates XML documents to a database through two major access and storage

techniques by defining elements Xcolumn and Xcollection. Xcolumn defines how to store and retrieve entire XML documents as column data of the XML user defined type (UDT)." *Chau*, ¶¶ 76 and 122. In rejecting claim 1, the Examiner cites to aspects of a DTD (document type definition) provided for the DAD. As is known, a DTD describes the XML elements and attributes available for a given XML grammar, and a "valid:" XML document is an XML document that conforms to the rules of a given DTD. In the present rejection, the DTD for the DAD allows a DAD to include an "element_node" element, and that an "element_node" element may include a "comment node." In other words, a valid DAD may include the following XML structure.

```
<document root>
...
    <element node>
        <comment node> #PCDATA </comment node>
    <element node>
...
</document root>
```

Regarding these tags, the only additional description provided by *Chau* is in paragraph 195, which provides in full "comment_node: representing the comment for this element." Applicants submit the mere fact that an XML document composed against the DAD DTD may have an <element_node> tag and a <comment_node> sub-tag, fails to disclose a step of receiving a hierarchical data structure containing the structured data wherein the structured data is annotation data related to an annotated data object and wherein at least two instances of a repeating field are contained in the structured data as part of a method a method for managing structured data having one or more repeating fields.

For all the foregoing reasons, Applicants submit that claims 1, 10, and 15, along with the claims dependent therefrom, are patentable over *Chau*. Accordingly, withdrawal of this rejection is respectfully requested.

Regarding claims 4, 5:

Claim 4 further limits claim 1. Specifically, claim 4 recites the method of claim 1:

wherein the structured data contains at least one repeating group of one or more fields, and the method comprises generating a group ordinal

value for each instance of the repeating group of fields, each ordinal value indicating an order in which a corresponding instance value of the repeating group of fields occurs in the structured data as received.

Regarding this limitation, the present rejection provides:

Claims 4-5 are rejected with the same rationale given for claim 1, wherein the repeating group of one or more fields consists of one field, as is required by claim 4, and the group thereby contains that one repeating field, as is required by claim 5.

Final Office Action, p.4. Claim 4, however, recites a group ordinal value being generated for each instance of a repeating group, in addition to the ordinal value generated for each instance of a repeating field (whether part of a repeating group or not). Thus, the claim requires both a field ordinal and a group ordinal. On this point the Examiner cites a passage from *Chau* related to a sequence number "DXX_SEQO" used to order XML path expressions:

this DXX_SEQNO keeps track of the order of elements occurred for the path expression in each inserted XML documents. With DXX_SEQNO, the user can retrieve a list of the elements with 'the same order as the original XML document using "ORDER BY DXX_SEQNO" in SQL

Final office Action, p.3. While this passage discloses that a "sequence number" may keep track of "the order of elements occurred for the path expression," it discloses nothing about a group ordinal number applied to multiple instances of a repeating group, in addition to a field ordinal applied to instances of a repeating field. For these reasons, Applicants submit that claims 4 and 5 are patentable over *Chau* and respectfully request, therefore, that this rejection be withdrawn.

Claim Rejections - 35 U.S.C. § 103

Claims 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chau* in view of *Mihai et al.* (US 2005/0065817, hereinafter "*Mihai*").

Claim 6 depends from one of claim 1 and is, therefore, believed to be allowable for the reasons provided above. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted, and
S-signed pursuant to 37 CFR 1.4,

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